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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/683,720	02/06/2002	John R. Miller	WHB-31571	8647

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EXAMINER

FEGGINS, KRISTAL J

ART UNIT PAPER NUMBER

2861

DATE MAILED: 08/05/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/683,720

Applicant(s)

MILLER, JOHN R. *N*

Examiner

K. Feggins

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 13-29 is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☒ Claim(s) 2-12, 14-22 and 24-29 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claim 2-12, 14-22 & 24-29 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

Claims 2-12, 14-22 & 24-29 are objected to because they recite structure limitations that do not manipulate the method steps recited in claim 1. Therefore they do not further define the method of claim 1. Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

3. Claims 1-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Wiklof et al. (US 5,625,399).

Wiklof et al disclose the following claimed limitations:

* regarding claim 1, a method of processing a thermal element group to create a printed image (Abstract);

* providing printing parameters for a supply (col 10, lines 11-20);

* determining a dot history pattern and a number of thermal elements for the thermal element group/history RAM/ (col 10, line 33-col 11, line 42, figs 6, 10, 11);

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*assigning thermal elements to the thermal element group based on the number of thermal elements determined for the thermal element group (col 6, lines 27-44, col 10, line 33-col 11, line 42, figs 6, 10, 11);

* generating a packed table, the packed table comprising values based on the printing parameters, the dot history pattern, the number of thermal elements for the thermal element group, and the thermal elements assigned to the thermal element group (col 6, lines 27-44, col 8, line 22-col 9, line 10, col 10, line 33-col 11, line 42, figs 6, 10, 11);

* wherein the printed image is created using a bit map pattern, a packed dot history pattern, the packed table, and the printing parameters, each of which has been stored in printer memory (col 6, lines 27-44, col 8, line 22-col 9, line 10, col 10, line 33-col 11, line 42, figs 6, 10, 11).

* regarding claim 2, wherein the printing parameters comprise a microstroke number and microstroke energy values (the recited structure limitations does not manipulate the method steps recited in claim 1. Therefore they do not further define the method of claim 1).

* regarding claim 3, wherein a memory cell associated with the supply provides the printing parameters (the recited structure limitations does not manipulate the method steps recited in claim 1. Therefore they do not further define the method of claim 1).

* regarding claim 4, wherein the packed dot history pattern comprises at least one site associated with a thermal element adjacent to a selected thermal element (the recited structure limitations does not manipulate the method steps recited in claim 1. Therefore they do not further define the method of claim 1).

* regarding claim 5, wherein the packed dot history pattern comprises at least one site based on a prior generation of a selected thermal element (the recited structure limitations does not manipulate the method steps recited in claim 1. Therefore they do not further define the method of claim 1).

* regarding claim 6, wherein the packed dot history pattern comprises at least one site based on a prior generation of a thermal element adjacent to a selected thermal element (the recited structure limitations does not manipulate the method steps recited in claim 1. Therefore they do not further define the method of claim 1).

* regarding claim 7, wherein the bit map pattern comprises values of bit. map pattern data, the bit map pattern data comprising a plurality of ones and zeros (the recited structure limitations does not manipulate the method steps recited in claim 1. Therefore they do not further define the method of claim 1).

* regarding claim 8, wherein the ones and zeros represent an instruction

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to generate a dot or not generate a dot (the recited structure limitations does not manipulate the method steps recited in claim 1. Therefore they do not further define the method of claim 1).

* regarding claim 9, wherein the packed table comprises a packed index, a packed index length, packed index values, divided microstrokes, packed binary pulse numbers, and packed strobe numbers (the recited structure limitations does not manipulate the method steps recited in claim 1. Therefore they do not further define the method of claim 1).

* regarding claim 10, wherein the packed table is based on a number of possible energy value combinations and a packed thermal element number (the recited structure limitations does not manipulate the method steps recited in claim 1. Therefore they do not further define the method of claim 1).

* regarding claim 11, wherein generation of the packed table comprises inserting the selected number of thermal elements into the selected dot history pattern (the recited structure limitations does not manipulate the method steps recited in claim 1. Therefore they do not further define the method of claim 1).

* regarding claim 12, wherein the thermal element group comprises at least one of consecutive thermal elements, sequential thermal elements, and

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adjacent thermal elements (the recited structure limitations does not manipulate the method steps recited in claim 1. Therefore they do not further define the method of claim 1).

Allowable Subject Matter

4. The following is an examiner's statement of reasons for allowance: The primary reason for allowance of claims 13-22 is the inclusion of the method step of processing a thermal element group to create a printed image that includes creating a packed index having a packed index length, the packed index length based on the packed thermal element number, and determining packed index values to occupy the packed index length, the packed index values based on the packed dot history pattern; dividing microstrokes, the microstrokes based on the microstroke number stored in the printer memory, such that divided microstrokes are produced; assigning packed binary pulse numbers to the divided microstrokes based on a strobe pattern, the packed binary pulse numbers corresponding to each of the packed index values occupying the packed index length; and determining packed strobe numbers based on the packed binary pulse numbers, the packed strobe numbers corresponding to each of the packed index values occupying the packed index length, wherein the printed image is created by using a bit map pattern, the packed dot history pattern, the packed index values, the packed strobe numbers, and the microstroke energy values. It is these steps found in each of the claims, as they are claimed in the combination of, which has not been found, taught or suggested by the prior art of record that makes these claims allowable.

The primary reason for allowance of claims 23-29 is the inclusion of the method step of processing a thermal element group to create a printed image that includes creating a packed index having a packed index length, the packed index length based on the packed thermal element number, and determining packed index values to occupy the packed index length, the packed index values based on the packed dot history pattern; dividing microstrokes, the microstrokes based on the microstroke number stored in the printer memory, such that divided microstrokes are produced; assigning packed binary pulse numbers to the divided microstrokes based on a strobe pattern, the packed binary pulse numbers corresponding to each of the packed index values occupying the packed index length; determining packed strobe numbers based on the packed binary pulse numbers, the packed strobe numbers corresponding to each of the packed index values occupying the packed index length, until an entire raster line of packed strobe numbers is ascertained, wherein the printed image is created by using a bit map pattern, the packed dot history pattern, the packed index values, the entire raster lines of the packed strobe numbers, and the microstroke energy values. It is these steps found in each of the claims, as they are claimed in the combination of, which has not been found, taught or suggested by the prior art of record that makes these claims allowable.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Spano (US 6404452 B1) disclose an auxiliary control device for managing printing in a thermal printer. Yamamoto et al. (US 5038154) disclose driving an apparatus in accordance with the heating element energization patterns.

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Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Communication With The USPTO

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to K. Feggins whose telephone number is 703-306-4548. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, B. Fuller can be reached on 703-308-0079. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7722 for regular communications and 703-872-9318 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.


K. Feggins
July 25, 2003